

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-024091**Date Inspected:** 24-May-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the Self-Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

OBG Segment 14E

This QA Inspector performed verification Ultrasonic Testing (ABF Request No: 05242011-2) in accordance with ABF/CT Pattern "D" UT Procedure 001 Revision 1. All recordable Indications if found were recorded on a separate data sheet that Caltrans QA generates after performing a joint inspection with ABF ultrasonic testing personnel. The location of the inspection was identified as weld between two Deck panels at intersection of OBG segment 14E. The weld designations were as;

SEG3019\*-007 (DP3161A to DP3162A)

This Quality Assurance (QA) Inspector observed the following work in progress:

TA YARD

OBG Seg 14W:

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The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020Q-121/122 [Complete Joint Penetration (CJP) weld at panel point (PP) 126]. The welder is identified as 045175 and was observed welding in 1G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2231-ESAB.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020M-044 [CJP weld at PP127]. The welder is identified as 067572 and was observed welding in 4G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020R-130 [CJP weld at PP 126]. The welder is identified as 067765 and was observed welding in 4G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020AJ-475 [CJP weld at PP 126]. The welder is identified as 066361 and was observed welding in 2G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2212-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020U-584 [CJP weld at PP 126]. The welder is identified as 067949 and was observed welding in 1G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2211-Tc-U4b-FCM-1.

This QA Inspector, along with Mr. Shailesh Wadkar; performed in process Visual Inspection of welds (Segment 14W) at Panel Points (PP) 126 to PP 127. Visual Inspection was performed on the welds between Longitudinal Diaphragm (LD) 3050A to LD 3048A (on the welds inside of the Segment). At two locations stiffener on LD to FB welds, this QA Inspector observed to have toe cracks. Details are as follows:

SEG3020Z-023, 055

This QA Inspector informed to ZPMC CWI, identified as Mr. An Qing Xiang. The weld locations were documented and forwarded to the CT Lead QA Inspector for further disposition. See attached photos for more details.

Blasting Inspection:

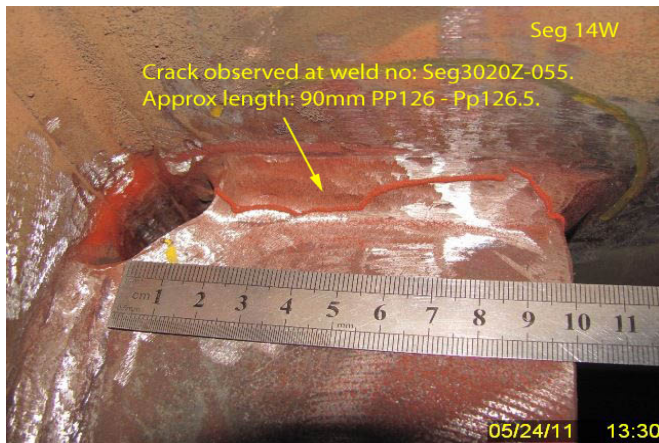
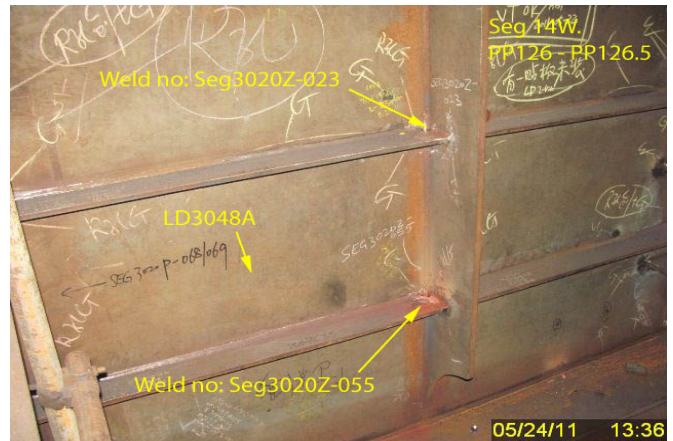
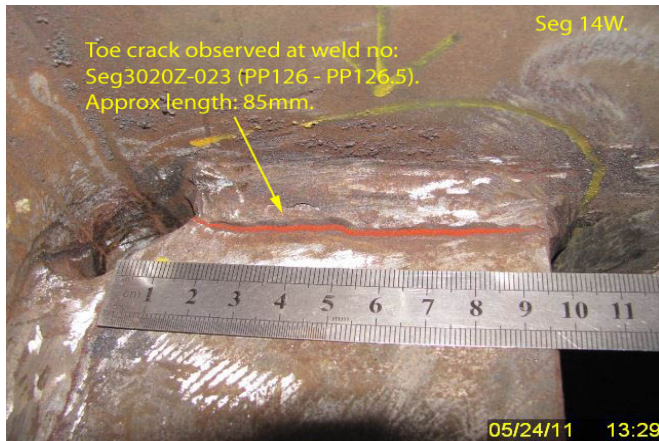
OBG Seg 13AW:

Blasting inspection was done for the weld joint no: Seg 3013A-010 to 017 [Bottom Panel (BP) to Side Panel (SP) complete joint penetration (CJP) welds, from panel point (PP) 117.5 to PP120], external surfaces of BP3056A (at PP120, PP119+1500 and PP119-1500) and the Side Panel (SP) 3092E. It was observed that the Ultrasonic Testing (UT) of the above mentioned weld numbers was yet to done. Also, the Floor Beam (FB) to Side Panel (SP) cope holes (at PP119, PP119-1500 and PP119+1500) needs to be profile corrected. This was informed to ZPMC CWI, identified as Mr. An Qing Xiang.

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Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

**Inspected By:** Gaikwad,Umesh

Quality Assurance Inspector

**Reviewed By:** Peterson,Art

QA Reviewer